

1 Aaron Greenspan (*Pro Se*)  
2 956 Carolina Street  
3 San Francisco, CA 94107-3337  
4 Phone: +1 415 670 9350  
5 Fax: +1 415 373 3959  
6 E-Mail: aaron.greenspan@plainsite.org

7 **UNITED STATES DISTRICT COURT**  
8 **NORTHERN DISTRICT OF CALIFORNIA**  
9 **SAN FRANCISCO DIVISION**

10 AARON GREENSPAN,

11 Plaintiff,

12 v.

13 OMAR QAZI, SMICK ENTERPRISES, INC.,  
14 ELON MUSK, and TESLA, INC.,

15 Defendants.

Case No. 3:20-cv-03426-JD

**PLAINTIFF'S NOTICE OF  
MOTION AND MOTION FOR  
RECUSAL PURSUANT TO  
28 U.S.C. § 455**

Date: TBD

Time: TBD

Courtroom: 11, 19<sup>th</sup> Floor

Judge: Hon. James Donato

Complaint Filed: May 20, 2020

TAC Filed: February 12, 2021

1                                    **NOTICE OF MOTION AND MOTION**

2                    **TO ALL PARTIES AND THEIR ATTORNEYS OF RECORD: PLEASE TAKE**  
3 **NOTICE THAT** Plaintiff Aaron Greenspan hereby moves this Court for the recusal of Judge  
4 James Donato pursuant to 28 U.S.C. § 455 on the basis of his prior relationship with Attorney  
5 John C. Dwyer (who represents Defendants Elon Musk and Tesla, Inc.) during their overlapping  
6 employment at Cooley LLP; on the basis of Judge Donato's prior representation of key business  
7 partners of Defendant Tesla, Inc. whose involvement is likely to arise in this case; on the basis of  
8 Judge Donato's apparent unwillingness to consider the case before him; and on the basis of  
9 various displays of bias. This Motion is based upon this Notice of Motion and Motion and the  
10 accompanying Memorandum of Points and Authorities, the papers on file in this action, and such  
11 other and further evidence or argument that the Court may consider.

12                                    **STATEMENT OF RELIEF SOUGHT**

13                    Plaintiff seeks the recusal of Judge James Donato and the re-assignment of this case to a  
14 different District Judge by the Clerk of Court.

15                                    **STATEMENT OF ISSUE TO BE DECIDED**

16                    The issue to be decided is whether pursuant to 28 U.S.C § 455, Judge James Donato must  
17 recuse himself or should recuse himself to avoid the appearance of partiality.

18                                    **STATEMENT OF FACTS**

19                    This action was filed on May 20, 2020. ECF No. 1. Initially, the case was assigned to  
20 Magistrate Judge Jacqueline Scott Corley. ECF No. 3. On May 27, 2020, Plaintiff Aaron  
21 Greenspan declined consent to have the case heard by a Magistrate Judge, and so it was  
22 randomly re-assigned to District Judge James Donato. ECF Nos. 7, 8, 9.

23                    While Defendants Elon Musk and Tesla, Inc. ("Tesla" and together, "Tesla Defendants")  
24 were initially represented by internal counsel for Tesla, they eventually retained the services of  
25 Cooley LLP ("Cooley"). On July 9, 2020, after Judge Donato was assigned to the case, Cooley  
26 attorneys Aarti G. Reddy and John C. Dwyer formally appeared in this case on Tesla  
27 Defendants' behalf. ECF Nos. 32, 33. Plaintiff was subjected to continuous harassment by  
28

Defendant Omar Qazi throughout these proceedings and repeatedly petitioned the Court for sanctions accordingly. ECF Nos. 66, 77, 83. All of these requests were denied. ECF No. 102. When the harassment became intolerable, Plaintiff requested leave to file for a temporary restraining order. ECF No. 113. This was also denied. ECF No. 115. The Court issued its first substantive ruling on Plaintiff's claims on June 23, 2021. ECF No. 125.

### **MEMORANDUM OF POINTS AND AUTHORITIES**

#### **I. Judge Donato Is Conflicted On Account Of His Prior Employment At Cooley LLP**

When he worked in private practice prior to his nomination for judgeship, Judge Donato worked for Cooley LLP, among other firms. While Cooley is a large firm with many clients,<sup>1</sup> Judge Donato specifically worked with Attorney John C. Dwyer while representing Nvidia Corporation ("Nvidia"). For example, in *Jacobs v. Nvidia Corporation et al*, Case No. 3:07-cv-00302 (N.D. Cal 2007), "JAMES DONATO (146140)" and "JOHN C. DWYER (136533)" appear directly adjacent to each other in the header of several court filings. *Jacobs* was one of roughly a dozen cases on which Judge Donato and Attorney Dwyer worked together representing Nvidia. According to court filings, at that time, both Judge Donato and Attorney Dwyer worked out of Cooley's San Francisco office. According to other documents, both were partners of the firm.<sup>2</sup>

28 U.S.C. § 455(a) states that, "Any justice, judge, or magistrate judge of the United States shall disqualify himself in any proceeding in which his impartiality might reasonably be questioned." 28 U.S.C. § 455(b)(2) states that, "He shall also disqualify himself in the following circumstances: Where in private practice he served as lawyer in the matter in controversy, or a

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<sup>1</sup> Cooley also represented and still represents Mark Zuckerberg and Facebook, Inc. regarding their settlement agreement with Plaintiff. Judge Donato appears to doubt the facts of Plaintiff's involvement with Facebook—facts verified by *The New York Times* and Zuckerberg himself—based on use of the words "says" and "a claim" on page 3 of ECF No. 125, not used otherwise.

<sup>2</sup> That Attorney Dwyer represents Tesla Defendants in this particular case may not be a coincidence. Cooley does represent Tesla in other cases in the Northern District of California, such as Case No. 3:18-cv-04865-EMC, *In re Tesla Inc. Securities Litigation*; 3:17-cv-05434-WHO, *Skiles v. Tesla, Inc. et al*; and Case No. 3:18-cv-07460-JD, *Nikola Corporation v. Tesla Incorporated*, but this case is the only one in which Cooley represents Tesla and where Judge Donato's former colleague, Attorney Dwyer, has made an appearance.

1 lawyer with whom he previously practiced law served during such association as a lawyer  
2 concerning the matter, or the judge or such lawyer has been a material witness concerning it.”  
3 28 U.S.C. § 455. Both sections of the statute are at issue in these proceedings.

4 There can be no debate that Attorney Dwyer qualifies under 28 U.S.C. § 455(b)(2) as “a  
5 lawyer with whom [Judge Donato] previously practiced law.”<sup>3</sup> The only possible question is  
6 whether Judge Donato and Attorney Dwyer “served during such association as a lawyer  
7 concerning the matter.”

8 The “matter” presently before this Court concerns a wide-ranging set of allegations into  
9 accounting practices by Tesla Defendants, which involve issues stemming from questionable  
10 cash balances to revenue recognition for next-generation assisted driving systems to cover-ups of  
11 valuable factory waste from battery manufacturing. Tesla is a large corporation, and it cannot  
12 produce all of its products without the substantial assistance of partner companies who are more  
13 strategically important than typical corporate vendors. Some of these partner companies are, for  
14 example, Panasonic Corporation, CATL, LG—all of which are involved in battery  
15 manufacturing—and Nvidia Corporation. Nvidia has provided graphics processing units  
16 (“GPUs”) to Tesla for a number of applications, including Tesla’s “Autopilot” computer and  
17 most recently, Tesla servers. *See* Exhibit A, “Tesla Unveils Top AV Training Supercomputer  
18 Powered by NVIDIA A100 GPUs.”

19 In addition to Judge Donato representing Nvidia alongside Attorney Dwyer, Judge  
20 Donato also represented LG Electronics USA, Inc., a division of Tesla partner LG, during his  
21 time as an attorney at Sherman & Sterling, LLP, as recently as 2013. LG has recently been in the  
22 news as this case has been pending with announcements regarding its future plans involving  
23 Tesla. *See* Exhibit B, “Exclusive: LG hopes to make new battery cells for Tesla in 2023 in U.S.  
24 or Europe - sources.”

25 This constellation of conflicts eliminates Judge Donato’s ability to claim impartiality in  
26 this matter, and mandates recusal pursuant to 28 U.S.C. § 455(a) and 28 U.S.C. § 455(b)(2).

27 <sup>3</sup> There is also no question that Cooley attorney Aarti Reddy was a material witness to some of  
28 the events at issue in this lawsuit during her prior employment with Defendant Tesla, Inc.

## II. Judge Donato's Handling of this Case Calls His Impartiality Into Question

### A. Judicial Canon 3(A)(2) Requires The Assigned Judge To Hear The Case and to Maintain Order and Decorum

Judge Donato, like all federal judges, is required to abide by the Code of Conduct for United States Judges.<sup>4</sup> This Code comprises enumerated ethical Canons, including Canon 3(A)(2), which states, "A judge should hear and decide matters assigned, unless disqualified, and should maintain order and decorum in all judicial proceedings." Unfortunately, at this point in the proceedings, there is sufficient evidence to suggest that Judge Donato has failed to uphold this section of Canon 3 for two reasons: he has not heard the actual case before him; and he has failed to maintain order and decorum, repeatedly brushing aside Plaintiff's serious concerns.

#### 1. Judge Donato Opted Not To Hear the Case Before Him by Ignoring Multiple Key Allegations In The Third Supplemental and Amended Complaint ("TAC")

In his June 23, 2021 Order Re Motions To Dismiss And Motion To Strike, ECF No. 125 (the "Order"), Judge Donato neglected to address many of the most important allegations in this lawsuit, as if those allegations had never been made. His only commentary on half of the extremely detailed securities allegations in the TAC was, "Similar deficiencies run through all 35 securities fraud issues raised in the TAC. Overall, the TAC has not identified actionable false or misleading statements with the requisite level of particularity, and so dismissal of the securities fraud claim is warranted." This non-specific, conclusory, boilerplate verbiage gives Plaintiff little hope of correcting deficiencies in the complaint. Among the facts not addressed by the Court in any way, yet central to the lawsuit, were:

- a) Defendant Musk's recent open admissions regarding Tesla's at-the-time undisclosed yet likely bankruptcy. *See* TAC ¶¶ 4, 268 (bold, italic text in Issue No. 1);
- b) Internal Tesla documents spelling out the company's concealment of hundreds of millions of dollars worth of factory waste and failure to adhere to internal financial controls, among other problems. *See* TAC ¶ 272 (bold, italic text in Issue No. 30)

<sup>4</sup> *See* <https://www.uscourts.gov/judges-judgeships/code-conduct-united-states-judges>.

and TAC Exhibit A;

- c) Defendant Musk's admission, relevant to scienter, that he believed omitting material facts could be necessary in order to "survive" because of the precedent set by the failure of Solyndra. *See* TAC ¶ 279(b);
- d) Defendant Tesla's disclosure that Defendant Musk's Twitter account was a communications medium regulated by the Securities and Exchange Commission. *See* TAC ¶ 179 and TAC Exhibit K.
- e) The deposition transcript of former Tesla employee Karl Hansen, also relevant to scienter, which stated that Musk was personally on a "telephone conference" where "folks in the accounting world" discussed "excess losses of 100 million-plus dollars" never disclosed to shareholders. *See* TAC ¶ 272 (Issue No. 30) and TAC Exhibit L;
- f) Defendant Qazi's placement of banner advertising on various web pages, reflecting his commercial intent to profit from libel involving Plaintiff. *See* TAC ¶¶ 147, 160;
- g) Numerous facts indicating that Defendant Omar Qazi had continuously acted in bad faith, e.g. that he had created a website to harass Plaintiff's disabled brother, among Plaintiff's other family members; falsely called Plaintiff a "serial rapist" in public; impersonated Plaintiff's business, family members, and AT&T; and posted altered photographs of Plaintiff. *See* TAC ¶¶ 95-96, 161 (Statement Nos. 12, 24), 169.

By not addressing any of these key points, among others, Judge Donato did not actually hear the case in front of him. Judge Donato actively avoided every opportunity to learn more about the facts of the case by vacating every single hearing scheduled. His Order, misquoting Plaintiff's complaint, containing typographical errors, and conflating enumerated securities "issues" with libelous "statements," appears to be the rushed work of a judge who did not have the time and/or interest to hear the case before him except to dismiss all of the claims related to his former colleague's clients. This is possibly because many judges are used to *pro se* plaintiffs making baseless complaints. "The *attitude* of the judges toward *pro se*'s—a generally unsympathetic attitude...resembles the common tendency to dislike one's 'inferiors,' with

obvious exceptions such as pets... [T]hose lawsuits [i.e., lawsuits by pro se's] are viewed as the least important, the least meritorious, and the least glamorous.” REFORMING THE FEDERAL JUDICIARY at 135 (Richard A. Posner, 1st ed., 2017).

**2. Judge Donato Opted Not To Hear the Case Before Him by Repeatedly Ignoring Plaintiff’s Substantiated Argument That Congress Did Not Intend the PSLRA to Apply To *Pro Se* Litigants**

Early in this case, Plaintiff raised the potentially dispositive question of the application of the Private Securities Litigation Reform Act (PSLRA) to *pro se* litigants. ECF No. 60. There exists no Ninth Circuit precedent requiring district judges to impose the burdens of the PSLRA on *pro se* litigants, no Supreme Court precedent to any similar effect, and a Congressional record clearly suggesting that the PSLRA should *not* be thus applied since Congress intended the law to stem nuisance suits *brought by securities lawyers*. Just prior to the passage of the PSLRA, the Ninth Circuit ruled that a scienter requirement “does unnecessary violence to the fundamental tenets of notice pleading” and further elaborated:

“As a radical departure from basic principles of our notice pleading system, an inference of scienter test inevitably contributes to the plague of burdensome and prolix complaints that have become fashionable in securities fraud cases today. Here, for example, the second amended complaint contains ***over 100 pages of painstakingly detailed allegations*** of evidentiary facts. ***This level of detail is typical of the modern securities fraud complaint.*** While I deplore such a radical departure from Rule 8’s command of ‘simple, concise, and direct’ pleadings, it is inevitable that prudent lawyers, faced with the obstacle of an inference of scienter test at the pleading stage, will throw into their complaints every scrap of evidence they can muster” (emphasis added).

*In re GlenFed, Inc. Securities Litigation*, 42 F. 3d 1541, 1555 (9th Cir. 1994).

Judge Donato declined to consider any of these arguments, including the above Ninth Circuit precedent (or if he did consider them, there was no indication that he had), issuing an electronic order on August 7, 2020 with no citation to any law or precedent at all. ECF No. 63. In full, it read, “ORDER. The motion to lift discovery stay, Dkt. No. [60], is denied. A stay on discovery will continue pending an order on the motion to dismiss, Dkt. No. [56]. Signed by Judge James Donato on 8/7/2020.”

1 “Such a summary order violates due process and precludes this court from determining  
2 whether the trial court abused its discretion...” *Morin v. Rosenthal*, 19 Cal. Rptr. 3d 149 –  
3 Cal.App.2nd 155 (2004).

4 **3. Judge Donato Repeatedly Overlooked Litigant and Attorney**  
5 **Misconduct, Causing Prejudice to Plaintiff**

6 Throughout these proceedings, Plaintiff identified instances in which various Defendants:

- 7 a) publicly broadcast non-existent “court orders” from this case to raise defense funds;  
8 b) openly deleted material evidence;  
9 c) pretended not to have received service documents that logs show *were* received;  
10 d) made credible threats and used suicidal language;  
11 e) repeatedly posted confidential settlement materials;

12 and in which their attorneys:

- 13 f) refused to provide Plaintiff with any working contact information (phone or e-mail);  
14 g) refused to cooperate with Plaintiff to accept service of process;  
15 h) deliberately misquoted the Federal Rules of Civil Procedure in an attempt to exploit  
16 Plaintiff’s *pro se* status;  
17 i) deliberately cited an outdated version of the Federal Rules of Civil Procedure;  
18 j) lied to the Court about the content of a recorded voicemail apologizing for some of  
19 the above;  
20 k) committed perjury, *later admitted to in writing*.

21 Judge Donato overlooked all of these, not even holding a hearing to better understand the  
22 source of the acrimony, leading to a circus environment and the “flood of pleadings motions”  
23 alluded to in the Order. Had the Court enforced decorum at any point in time, many of these  
24 pleadings would have been avoided or moot. Judge Donato’s failure to do so in violation of  
25 Canon 3(A)(2), as well as attributing Defendants’ serial misconduct to Plaintiff, could reasonably  
26 be perceived as a lack of “impartiality” pursuant to 28 U.S.C. § 455(a).



**B. Judge Donato's Order on the TAC Calls His Impartiality Into Question**

**1. Judge Donato Selectively Exercised Supplemental Jurisdiction, Benefitting Elon Musk and Tesla, Inc. But Not Other Defendants**

In the Order, Judge Donato wrote, "The Court also resolves the challenges to the state law claims against Tesla and Musk, but declines to exercise supplemental jurisdiction over the state law claims against Qazi and Smick pending further order." It is at the very least confusing that after over one year of pleadings, motion practice, and multiple pleas to the Court to enforce decorum, state law claims involving a billionaire represented by the Judge's former colleague would be summarily dismissed on the basis of supplemental jurisdiction, but similar or the same state law claims involving other defendants would not merit examination by the Court at all.

A reasonable person would have grounds to question Judge Donato's impartiality in this situation pursuant to 28 U.S.C. § 455(a). One would reasonably expect that a "common nucleus of operative fact" necessary to support supplemental jurisdiction either exists in this case for all defendants or it does not exist for any at all "such that a plaintiff 'would ordinarily be expected to try them in one judicial proceeding' (citations omitted)." *Trustees of Construct. v. Desert Valley Landscape*, 333 F. 3d 923, 925 (9th Cir. 2003).

**2. In The Context Of The PSLRA, Judge Donato's Interpretation of Rule 8 Has Mandated An Impossible Catch-22 Pleading Standard With Moving Goalposts**

In his Order, Judge Donato lamented the length of the complaints Plaintiff has filed in this case, seemingly deliberately conflating pages of allegations with pages of exhibits to make the filings seem far more unreasonable than they actually are.<sup>5</sup> The complaints filed were detailed, yet well within what other federal judges have considered reasonable under Federal Rules of Civil Procedure ("Rule") 8, due to Plaintiff's expectation of (wrongly) needing to conform with the heightened pleading standard of the PSLRA. Judge Donato himself

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<sup>5</sup> This is not the only conflation in Judge Donato's Order that suggests prejudice. The Order begins with the Court claiming that Plaintiff "sees *himself* as [Tesla's] short-seller 'arch-nemesis'" (emphasis added). Nowhere in any version of any complaint Plaintiff filed in this case does Plaintiff state this. The TAC actually states that "short-sellers" *as a group* are "Defendant Musk's arch-nemesis," which is hardly contested given Defendant Musk's open antagonism.

acknowledges twice in his Order that the PSLRA is “demanding,” yet his vague requirements (see ECF No. 101, stating in part, “Complaints running to 80 or more pages and accompanied by hundreds of pages of exhibits are typically not well-taken under Rule 8, and may be summarily dismissed on that basis”) set up an impossible pleading standard. Even when Plaintiff complied by filing a complaint of 78 pages in response, Judge Donato bristled that Plaintiff “has filed over 4,000 pages of pleadings.” Keeping in mind the overwhelming paperwork burden that judges face—largely the result of statutory mandates—this *cumulative* measure of pages including *previous* complaints and their exhibits that the Court *never ruled upon*, and which triggered no warning at the time of filing, suggests the bias of a judge looking for a pretext to dismiss a case.

Other judges in this Court have taken the opposite approach when considering how Rule 8 interacts with the PSLRA. As noted in Plaintiff’s opposition to Tesla Defendants’ Motion to Dismiss, “[T]he Ninth Circuit has cautioned against applying a strict requirement for a ‘short’ statement under Rule 8 in light of the heightened pleading standards of Rule 9(b) and PSLRA” (citations omitted). *In Re Apple Inc. Securities Litigation*, Case No. 4:19-cv-02033-YGR (N.D. Cal. June 2, 2020). This citation was further supported by Plaintiff’s footnote 3:

“It is ‘perfectly understandable’ to ‘err[] on the side of detail and prolixity in an effort to explain the facts’ given the PSLRA’s heightened pleading standard, even while keeping Rule 8 in mind. *In re Global Crossing Ltd. Securities Litigation*, 313 F. Supp. 2d 189, 212. See also *Gienko, et al v. Padda, et al*, Case No. 1:00-cv-05070 (N.D. Ill. February 27, 2002) (permitting complaint of 386 pages total under Rule 8). Notably, Tesla Defendants had no problem with the 82-page or 110-page First and Second Amended Complaints, to which far more pages were attached. Only now do they protest the 78-page TAC, *by attaching 200 pages of their own*” (emphasis in original).

Most surprising is Judge Donato’s decision to move the goalposts for what is allowable under Rule 8 from no more than “80 [] pages” plus exhibits on January 15, 2021 to “no more than 50 pages inclusive of exhibits” on June 23. Rule 8 was not amended in the interim. While the urge to streamline litigation is laudable, this is an abuse of discretion that is inconsistent with Ninth Circuit and Northern District of California precedent. It also suggests that Judge Donato

1 was retaliating against Plaintiff for not following his vague order to some unspecified standard.<sup>6</sup>

### 2 **III. CONCLUSION**

3 Plaintiff respectfully requests that Judge Donato recuse himself from this case. He is  
 4 conflicted with counsel for Defendants Elon Musk and Tesla, Inc., who used to be his co-worker.  
 5 He is conflicted due to his own prior representation of two of Tesla's current key business  
 6 partners. Whether conscious or unconscious, he has exhibited partiality in a variety of manners  
 7 throughout the proceedings thus far. At this stage of the litigation, the end result of the complex  
 8 dynamics described above is a Catch-22, where Plaintiff is required to plead an extreme "level of  
 9 particularity" that Judge Donato calls "demanding" and that the Ninth Circuit has stated "does  
 10 unnecessary violence to the fundamental tenets of notice pleading," but to simultaneously do so  
 11 in a "short and plain statement" pursuant to Rule 8, within an arbitrary number of pages  
 12 unrecognized by other federal judges that keeps decreasing. Accordingly, the deck is stacked.  
 13 Plaintiff has no hope of amended claims being heard in an impartial manner before this Judge.

14  
 15 Dated: July 16, 2021

Respectfully submitted,

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 17  
 18 

19 Aaron Greenspan  
 20 956 Carolina Street  
 21 San Francisco, CA 94107-3337  
 22 Phone: +1 415 670 9350  
 23 Fax: +1 415 373 3959  
 24 E-Mail: aaron.greenspan@plainsite.org

25  
 26  
 27  
 28 <sup>6</sup> Similarly, Judge Donato threatened Plaintiff with sanctions for properly complying with Federal Rule of Civil Procedure 55 when Plaintiff filed applications for entry of default because Defendants Omar Qazi and Smick Enterprises, Inc. had failed to respond to multiple complaints, and because the Clerk of Court made an error due to another unwritten purported rule. ECF No. 72. In his Order, Judge Donato further accused unspecified parties, but presumably Plaintiff, of having filed "personally disparaging" content in this case, without specifying the offending document(s) and/or statement(s) such that they might be avoided in the future. Plaintiff notes that text perhaps perceived as disparaging merely reflects the record of Defendants' often "lurid" and "nasty" conduct.

**EXHIBIT A**

June 22, 2021 Nvidia Corporation Blog Post: “Tesla Unveils Top AV Training Supercomputer  
Powered by NVIDIA A100 GPUs”

# Tesla Unveils Top AV Training Supercomputer Powered by NVIDIA A100 GPUs

'Incredible' GPU cluster powers AI development for Autopilot and full self-driving.

June 22, 2021 by DANNY SHAPIRO

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Reading Time: 2 mins

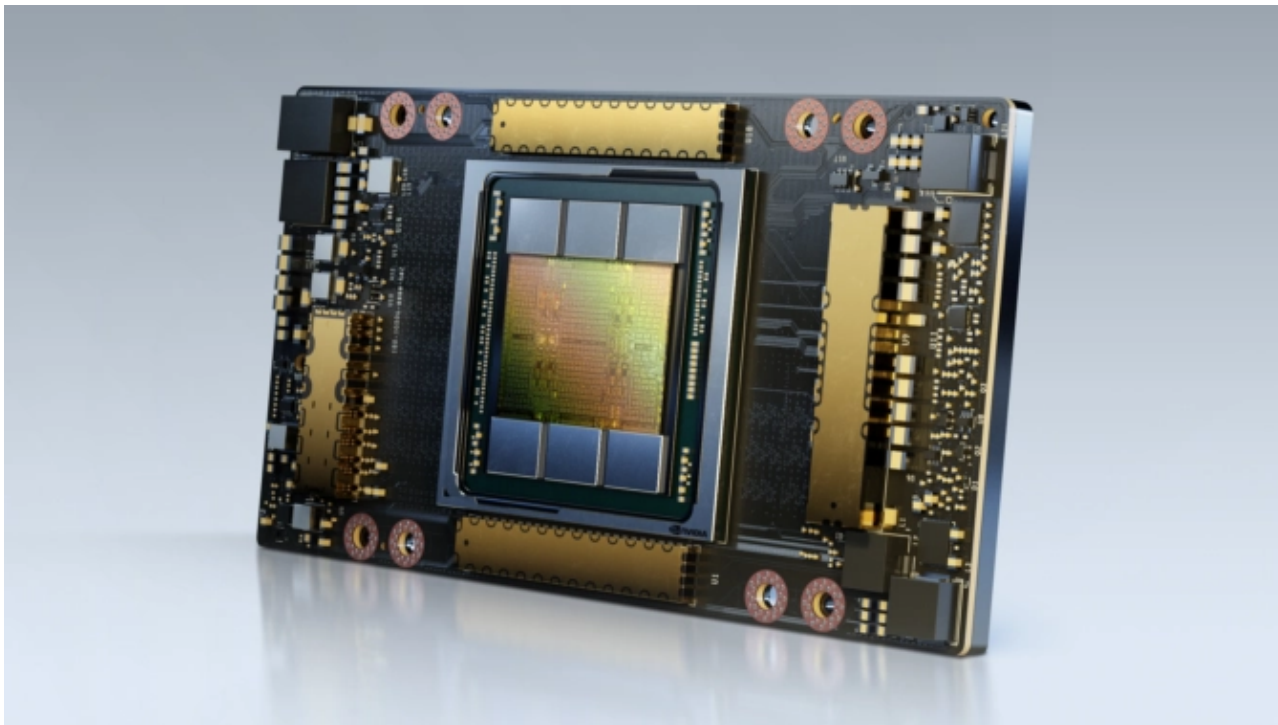
Tackling one of the largest computing challenges of this lifetime requires larger than life computing.

At CVPR this week, Andrej Karpathy, senior director of AI at Tesla, unveiled the in-house supercomputer the automaker is using to train deep neural networks for Autopilot and self-driving capabilities. The cluster uses 720 nodes of 8x NVIDIA A100 Tensor Core GPUs (5,760 GPUs total) to achieve an industry-leading 1.8 exaflops of performance.

"This is a really incredible supercomputer," Karpathy said. "I actually believe that in terms of flops, this is roughly the No. 5 supercomputer in the world."

With unprecedented levels of compute for the automotive industry at the center of its development cycle, Tesla is making it possible for autonomous vehicle engineers to do their life's work efficiently and at the cutting edge.

NVIDIA A100 GPUs deliver acceleration at every scale to power the world's highest-performing data centers. Powered by the NVIDIA Ampere Architecture, the A100 GPU provides up to 20x higher performance over the prior generation and can be partitioned into seven GPU instances to dynamically adjust to shifting demands.



The GPU cluster is part of Tesla's vertically integrated autonomous driving approach, which uses more than 1 million cars already driving on the road to refine and build new features for continuous improvement.

## From the Car to the Data Center

Tesla's cyclical development begins in the car. A deep neural network running in "shadow mode" quietly perceives and makes predictions while the car is driving without actually controlling the vehicle.

These predictions are recorded, and any mistakes or misidentifications are logged. Tesla engineers then use these instances to create a training dataset of difficult and diverse scenarios to refine the DNN.

The result is a collection of roughly 1 million 10-second clips recorded at 36 frames per second, totaling a whopping 1.5 petabytes of data. The DNN is then run through these scenarios in the data center over and over until it operates without a mistake. Finally, it's sent back to the vehicle and begins the process again.

Karpathy said training a DNN in this manner and on such a large amount of data requires "a huge amount of compute," which led Tesla to build and deploy the current generation supercomputer with high-performance A100 GPUs.

## In-house supercomputer



akarpathy

**Our latest cluster (1 of 3):**  
720 nodes of 8x A100 80GB. (5760 GPUs total)  
1.8 EFLOPS (720 nodes \* 312 TFLOPS-FP16-A100 \* 8 gpu/nodes)  
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**(next up: Dojo)**

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zoom

## Continuous Iteration

In addition to comprehensive training, Tesla's supercomputer gives autonomous vehicle engineers the performance needed to experiment and iterate in the development process.

Karpathy said the current DNN structure the automaker is deploying allows a team of 20 engineers to work on a single network at once, isolating different features for parallel development.

These DNNs can then be run through training datasets at speeds faster than what has been previously possible for rapid iteration.

"Computer vision is the bread and butter of what we do and enables Autopilot. For that to work, you need to train a massive neural network and experiment a lot," Karpathy said. "That's why we've invested a lot into the compute."

Watch the full CVPR session.

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Categories: Driving

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Tags: Automotive | NVIDIA DGX

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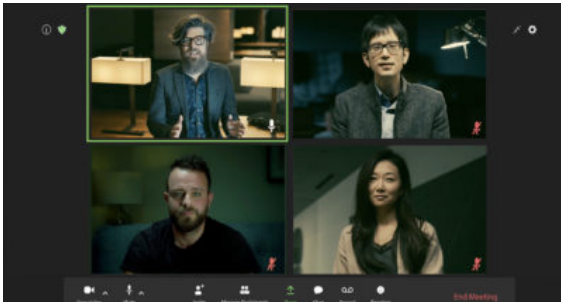
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## **Sherd Alert: GPU-Accelerated Deep Learning Sorts Pottery Fragments as Well as Expert Archeologists**

**EXHIBIT B**

March 9, 2021 *Reuters* Article: “Exclusive: LG hopes to make new battery cells for Tesla in 2023 in U.S. or Europe – sources”

**REUTERS**

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**AUTOS** MARCH 9, 2021 / 11:27 AM / UPDATED 4 MONTHS AGO

## Exclusive: LG hopes to make new battery cells for Tesla in 2023 in U.S. or Europe - sources

By Hyunjoo Jin

4 MIN READ



SAN FRANCISCO (Reuters) - LG Energy Solution aims to build advanced battery cells for Tesla Inc electric vehicles in 2023 and is considering potential production sites in the United States and Europe, two people familiar with the matter told Reuters.





FILE PHOTO: Visitors wearing face masks check a China-made Tesla Model Y sport utility vehicle (SUV) at the electric vehicle maker's showroom in Beijing, China January 5, 2021. REUTERS/Tingshu Wang

Tesla has not yet agreed to a deal that would expand LG's role in its supply chain beyond China, one of the sources said.

Last week, the Korean battery maker told Korean reporters it plans to build a U.S. factory where it would make battery cells for EVs and energy storage systems, to cater to U.S. and global customers as well as startups. It did not identify potential customers then, but one of the sources said it was hoping Tesla would buy the batteries.

In September, Tesla Chief Executive Elon Musk announced an ambitious plan to develop new cells in-house, prompting suppliers like LG and Panasonic to embrace the unproven technology or face risks of losing a major customer for the longer term.

The Korean supplier, a unit of LG Chem, has made samples for the so-called 4680 large-format cylindrical cells, said the sources, who asked not to be identified. It faces technological hurdles and the challenge of scaling up production, people familiar with the matter said.

"LG plans to produce 4680 cells at its new U.S. factory. They plan to build a new 4680 cell line to supply Tesla's Giga Berlin in Europe," one of the sources said, adding Spain is one of candidate for the European plant.

One of the sources said LG has never mass produced such large-format cylindrical cells, although increasing battery capacity is the correct call. “Tesla is a major customer, and LG can take risks,” another source said.

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The advertisement shows a collection of industrial equipment. On the left is a large black gearmotor with a silver output shaft. In the center is a black rectangular speed control unit with a red emergency stop button, a 'STOP' button, and a rotary switch for 'FORWARD' and 'REVERSE'. To the right of the speed control is another black gearmotor. In the foreground, there is a long, black cylindrical component, possibly a motor or actuator. A green printed circuit board (PCB) is visible in the background. The items are arranged on a white reflective surface.

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He said LG has not yet secured orders from Tesla for the 4680 cells, still under development. For now, Tesla is sharply boosting orders for 2170 cells used in the Model 3 and Model Y vehicles made in China, the source said.

LG declined to comment, and Tesla officials could not be reached for comment.

Tesla’s September plan to develop the new 4680 battery cells is meant to reduce production costs, improve battery performance and increase driving range. This would help with Tesla’s push to boost electric vehicle production significantly around the world.

Tesla is running a pilot factory for the new battery cells in California, and

Musk said recently Tesla is in talks with battery suppliers about developing 4680 batteries. He said Tesla will use the current cells for at least a few years, but will “retire” those cells over time.

LG currently supplies smaller cells to Tesla in China, as does Chinese battery maker CATL. Panasonic has partnered with Tesla in a \$5 billion battery “gigafactory” near Reno, Nevada.

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An advertisement for Bodine Electric Company. The image shows several industrial gearmotors and a speed control unit. In the center is a black rectangular speed control unit with a red emergency stop button, a black stop button, and a rotary switch with positions for FORWARD, STOP, and REVERSE. To the left and right are various sizes of black gearmotors with silver output shafts. A green printed circuit board is visible in the background. The products are arranged on a reflective white surface.

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LG currently has a \$2.3 billion joint venture with General Motors Co in Lordstown, Ohio, to make pouch-type electric vehicle batteries for future GM electric vehicles.

GM said separately it is considering building a second U.S. battery factory with LG.



The unusually candid comments from LG and GM came after another Korean battery supplier, SK Innovation, hopes the White House would overturn a recent U.S. trade ruling favoring LG, saying it threatens to disrupt battery supplies to Ford Motor and Volkswagen.

Tesla rival Lucid Motors, which has a multi-year supply deal with LG Chem, and is considering whether to make its own cells in house, said it is interested in different cell formats, Chief Executive Officer Peter Rawlinson earlier told Reuters.

Panasonic plans to start a test line for 4680 cells in Japan in the business year beginning April 1, according to a person familiar with the matter. The two companies have not said if they plan to collaborate on production of the 4680 cells.

Tesla may need to push out the timeframe for mass production, or work with partners at its newer plants in order to get cell production up and running quickly, said Caspar Rawles, an analyst at researcher Benchmark Mineral Intelligence.

Additional reporting by Paul Lienert in Detroit, Tim Kelly in Tokyo and Heekyong Yang in Seoul; editing by Ben Klayman and David Gregorio

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